

WHAT IS CLAIMED IS:

1. A method for treatment of a waste gas containing fluorine-containing compounds which comprises the steps of separating the solids from the waste gas, adding H_2 and/or H_2O or H_2 and/or H_2O and O_2 as a decomposition assist gas, thermally decomposing the waste gas by contact with γ -alumina at $500 - 1000^\circ C$, and removing acidic gases from the decomposed waste gas.
2. The method according to claim 1, wherein the temperature used in the thermally decomposing step ranges from $600 - 900^\circ C$.
3. The method according to claim 1, wherein said waste gas containing fluorine-containing compounds contains perfluoro-carbons and fluorinated hydrocarbons as well as oxidizing gases, acidic gases and CO.
4. The method according to claim 3, wherein said waste gas containing fluorine-containing compounds is a waste gas from a semiconductor fabrication process.
5. An apparatus for treatment of a waste gas containing fluorine-containing compounds which comprises a solids treating means for separating the solids from a waste gas containing fluorine-containing compounds, an addition means for adding H_2 and/or H_2O ; or H_2 and/or H_2O and O_2 as a decomposition assist gas to the waste gas leaving the solids treating means, a thermal decomposing means that is packed with γ -alumina heated at $500 - 1000^\circ C$ and which thermally decomposes the waste gas to which the decomposition assist gas has been added, an acidic gas treating means for removing acidic gases from the thermally decomposed waste gas, and channels for connecting these means in sequence.
6. The apparatus according to claim 5, wherein said solids treating means or said acidic gas treating means is a water scrubber.
7. The apparatus according to claim 5 or 6, which has not only an air ejector capable of adjusting the pressure in the apparatus through which the waste gas passes but also an FT-IR analyzer for controlling the emission density of the treated gas.

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